

1 What is claimed is:

2 1. A method for digitally storing a received program, comprising:
3 storing the received program as a first digital copy having a first quality level;
4 converting the first digital format into a second digital copy having a second
5 quality level of lesser quality than the first quality level;
6 storing the second digital copy; and
7 applying a retention policy which requires at least deletion of selected ones of the
8 stored first and second digital copies.

9
10 2. The method of claim 1, further comprising:
11 receiving a request to schedule a recording of the program;
12 determining a recording quality and a longevity for the program; and
13 associating the recording quality and longevity with the program;
14 wherein applying the retention policy is performed based at least in part on the
15 associated desired longevity.

16
17 3. The method of claim 2, wherein the recording quality comprises high,
18 medium and low quality.

19
20 4. The method of claim 2, wherein determining the quality and longevity
21 comprises a selected one of: utilizing a default quality and longevity or prompting for the
22 desired quality and longevity.

1 5. The method of claim 2, wherein longevity comprises long, medium, and
2 temporary, and wherein applying the retention policy further comprises comparing
3 associated quality settings and longevity to determine which stored copy of a program is
4 to be deleted.

5
6 6. The method of claim 1, further comprising:
7 receiving a request to schedule a recording of the program, the request having
8 an associated quality to utilize for recording the program;
9 inferring a longevity for the recording based on the associated quality;
10 periodically, during the inferred longevity, selecting a stored copy of the program
11 and determining a lesser quality for the stored copy based at least in part on how long
12 of the inferred longevity the stored copy has been stored; and
13 degrading the stored copy of the program in accordance with the lesser quality.

14
15 7. The method of claim 1, further comprising:
16 determining a bitrate and an encoding format for the first and second digital
17 copies, wherein the first and second quality levels are determined based at least in part
18 on the bitrate and the encoding format utilized.

19
20 8. The method of claim 1, wherein the first and second quality levels are
21 determined based at least in part on a bitrate utilized to encode the first and second
22 digital copies.

1 9. The method of claim 1, wherein the first and second quality levels are
2 determined based at least in part on an encoding format utilized to encode the first and
3 second digital copies.

4
5 10. The method of claim 1, further comprising:
6 converting the first digital format into a third digital format having a third quality
7 level of lesser quality than the second quality level; and
8 storing the third digital format;
9 deleting selected ones of the stored first, second, and third digital formats in
10 accordance with the retention policy.

11
12 11. The method of claim 1, further comprising:
13 converting the second digital format into a third digital format having a third
14 quality level of lesser quality than the second quality level; and
15 storing the third digital format;
16 deleting selected ones of the stored first, second, and third digital formats in
17 accordance with the retention policy.

18
19 12. A method for digitally storing a received program, comprising:
20 receiving a first program;
21 first converting the first program into a first higher quality copy and a first lower
22 quality copy, and storing the first higher and lower quality copies in a storage;

determining there is likely insufficient space in the storage for storing a second higher quality copy for a second program; and deleting at least one of the first higher quality copy and the first lower quality copy to make room within the storage for storing the second higher quality copy.

13. The method of claim 12, wherein stored copies of the first program each have an associated retention policy, and wherein the deleting the at least one of the first higher quality copy and the first lower quality copy is performed based at least in part on said associated retention policies.

14. The method of claim 13, wherein the deleting the at least one of the first higher quality copy and the first lower quality copy is performed at based at least in part on storage requirements for the second higher quality copy of the second program.

15. The method of claim 12, wherein the deleting the at least one of the first higher quality copy and the first lower quality copy is performed at based at least in part on storage requirements for the second higher quality copy of the second program.

16. The method of claim 12, further comprising:
receiving the second program;
second converting the second program into the second higher quality copy and a second lower quality copy; and
storing the second higher and lower quality copies in the storage.

1
2 17. The method of claim 12, further comprising:
3 determining a first quality level associated with the first program, wherein
4 converting the first program into the first higher quality copy comprises encoding the first
5 program with a bit rate determined based at least in part on the first quality level.
6

7 18. The method of claim 12, further comprising:
8 applying selected ones of global policies to all stored copies; and
9 altering the stored programs in accord with a selected global policy.
10

11 19. A PVR, comprising:
12 a video encoder operable to encode an input signal corresponding to a program
13 into a higher quality copy of the program for storage in a storage;
14 a transcoder operable to convert the higher quality copy of the program into at
15 least one lesser quality copy of the program for storage in the storage; and
16 a storage manager operable to inspect the policies within a policy store
17 associated with the storage manager and to apply selected ones of the policies to
18 copies of the program so as to manage consumption of the storage.
19

20 20. The PVR of claim 19, wherein the transcoder stores the higher and at
21 least one lesser quality copies of the program as components of a scalable bitstream.
22

1 21. The PVR of claim 19, wherein applying a selected one of the policies by
2 the storage manager includes the storage manager deleting the higher quality copy of
3 the program from the storage.

4
5 22. The PVR of claim 19, further comprising:
6 a video decoder for use in conjunction with retrieving a best available copy of the
7 program from the storage, the video decoder to convert the best available copy of the
8 program into an output format suitable for presentation to a display.

9
10 23. An article comprising a machine-accessible media having associated data
11 for digitally storing a received program, wherein the data, when accessed, results in a
12 machine performing:

13 storing in a storage the received program as a first digital copy having a first
14 quality level;

15 converting the first digital format into a second digital copy having a second
16 quality level of lesser quality than the first quality level;

17 storing the second digital copy in the storage; and

18 applying a retention policy which requires at least deletion of selected ones of the
19 stored first and second digital copies.

20
21 24. The article of claim 23 wherein the machine-accessible media further
22 includes data, which when accessed, results in the machine performing:

23 receiving a request to schedule a recording of the program;

determining a desired recording quality and a longevity for the program; and
associating the quality and longevity with the program, wherein the data, which
when executed applies the retention policy, further includes data for applying the
retention policy based at least in part on the associated desired longevity.

25. The article of claim 23 wherein the machine-accessible media further
includes data, which when accessed, results in the machine performing:

determining a first bitrate for encoding the first digital copy; and
determining a second bitrate for encoding the second digital copy;
wherein the data which when accessed results in storing the first and second
digital copies with the first and second quality levels further includes data which when
accessed results in determining the first and second quality levels respectively based at
least in part on the first and second bitrates.

26. An article comprising a machine-accessible media having associated data
for digitally storing a received program, wherein the data, when accessed, results in a
machine performing:

receiving a first program;
first converting the first program into a first higher quality copy and a first lower
quality copy, and storing the first higher and lower quality copies in a storage;
determining there is likely insufficient space in the storage for storing a second
higher quality copy for a second program; and

1 deleting at least one of the first higher quality copy and the first lower quality copy
2 to make room within the storage for storing the second higher quality copy.

3
4 27. The article of claim 26 wherein the machine-accessible media further
5 includes data, which when accessed, results in the machine performing:
6 receiving the second program;
7 second converting the second program into the second higher quality copy and a
8 second lower quality copy; and
9 storing the second higher and lower quality copies in the storage.

10
11 28. The article of claim 26 wherein the machine-accessible media further
12 includes data, which when accessed, results in the machine performing:
13 applying selected ones of global policies to all stored copies; and
14 altering the stored programs in accord with a selected global policy.